

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

REC'D 13 JAN 2006

(PCT Article 36 and Rule 70)

WIPO PCT

Applicant's or agent's file reference 00175	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/EP2004/001597	International filing date (day/month/year) 19.02.2004	Priority date (day/month/year) 19.02.2004	
International Patent Classification (IPC) or national classification and IPC G10H1/00			
Applicant NOKIA CORPORATION et al			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 8 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> <i>(sent to the applicant and to the International Bureau)</i> a total of sheets, as follows:</p> <ul style="list-style-type: none"> <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. <p>b. <input type="checkbox"/> <i>(sent to the International Bureau only)</i> a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Box No. I Basis of the opinion <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application 			

Date of submission of the demand 29.08.2005	Date of completion of this report 12.01.2006
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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
 - international search (under Rules 12.3 and 23.1(b))
 - publication of the international application (under Rule 12.4)
 - international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

Description, Pages

1-28 as originally filed

Claims, Numbers

1-53 as originally filed

Drawings, Sheets

1/16-16/16 as originally filed

a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. The amendments have resulted in the cancellation of:
 - the description, pages
 - the claims, Nos.
 - the drawings, sheets/figs
 - the sequence listing (*specify*):
 - any table(s) related to sequence listing (*specify*):
4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - the description, pages
 - the claims, Nos.
 - the drawings, sheets/figs
 - the sequence listing (*specify*):
 - any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-44,48-53
	No:	Claims	45-47,51-53
Inventive step (IS)	Yes:	Claims	12-18,32-37,48-50
	No:	Claims	1-11,19-31,38-47,51-53
Industrial applicability (IA)	Yes:	Claims	1-53
	No:	Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

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1. The following documents are referred to in this communication:

D1 : WO 03/077505 A (FERRANTI GIOVANNI ; MESSEL ATLE (DK); ELOMAA TIMO (FI); JOKINEN TAPANI) 18 September 2003 (2003-09-18) cited in the application

D2 : FR 2 741 229 A (BRUN PIERRE) 16 May 1997 (1997-05-16)

D3: WO 02/077585 A

D4 : PATENT ABSTRACTS OF JAPAN vol. 2000, no. 23, 10 February 2001 (2001-02-10) & JP 2001 157254 A (NEC CORP), 8 June 2001 (2001-06-08)

2. Document D1 discloses (the references in parenthesis applying to this document): a **programmable light organ** (see description page 10 line 9 - page 14 line 13) **on a mobile phone**, in which the light organ is playing on the basis of a sound input and/or a sequence of activation of lights, **such as a ringing tune stored in a memory** (see page 13 lines 23 and 24), the light arrangement being as described on page 6 lines 15-31, and the user interface as disclosed in figures 2-6.

D1 does not explicitly disclose whether the ringing tune stored in a memory (see page 13 lines 23 and 24) is coded in Midi format, and for that reason the present claims are considered to be marginally novel over D1. Indeed the choice of options on screen 6.3 of Fig.6 of D1 for producing a light organ sequence offers only the possibilities of using an actual audio signal (microphone, radio, audio player) and does not offer the option of using anything like the (MIDI) input data (or even the output) of a Midi synthesiser.

However the use of Midi and its variants for storing ringing tunes was well-known at the filing date as being particularly advantageous for mobile telephones because of their great compactness when compared to standard audio files, so that storing light organ sequence data in a midi-coded ringing tune is regarded as an obvious, even implicit teaching of D1, and Screen 6.3 therefore suggests "Midi ringing tune" as additional entry in the mind of any skilled person.

As this is the only difference between the present claims and the prior art, no inventive step can be seen, especially as the use of MIDI to drive a light organ at the same time as a Midi synthesiser is also well-known.

Document D2 discloses (the references in parenthesis applying to this document): how to code both the sound and light sequence information in the Midi format see page 1 lines 1-27, page 3 line 30- page 4 line 12, the light information for up to 8 lights

being coded on up to 8 midi channels not used for sound reproduction.

The note-on/note off MIDI commands are used to turn lights on and off (page 3 line 33) and the note velocity MIDI information codes light intensity (see page 4 lines 5 and 6), just like in the present application.

Document D3 is not used in proving lack of inventive step except to prove the examiner's allegations that the use of MIDI , and MIDI file editing, in mobile phones (see abstract referring to cellphones) was known (details of Midi file format and MIDI editing in paragraphs 0020- 0035, and to prove that activating keyboard lights in conjunction with MIDI music being played was also known, see last ten lines of paragraph 0044.

2.1. INDEPENDENT CLAIM 1

2.1.1. Document D1, which is considered to represent the most relevant state of the art, discloses a device from which the subject-matter of independent claim 1 differs in that: the music data is composed of two message types

2.1.2. The problem to be solved by the present invention may therefore be regarded as how to code both the sound and light sequence information (of, for instance, ringing tones) in a format suitable for mobile phones

2.1.3. In view of D2 the solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons: D2 teaches how to code both the sound and light sequence information in the MIDI format.

This format was and is known to be particularly suitable for storing ringing tones for mobile phones (see for instance D3), due to its great compacity compared to every other known sound or music coding format: this permits memory space savings.

2.1.4. Therefore the features disclosed in D1 and D2 would be combined by the skilled person, without exercise of any inventive skills in order to solve the problem posed. The proposed solution in independent claim 1 thus cannot be considered inventive (Article 33(3) PCT).

2.2. INDEPENDENT CLAIM 27

2.2.1. Document D1, which is considered to represent the most relevant state of the art, discloses a device/system/method from which the subject-matter of independent claim 27 differs in that: the music data is composed of two message types.

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2.2.2. The problem to be solved by the present invention may therefore be regarded as how to code both the sound and light sequence information in a format suitable for mobile phones.

2.2.3. In view of D2 the solution proposed in claim 27 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons: D2 teaches how to code both the sound and light sequence information in the MIDI format. This format was and is known to be particularly suitable for storing ringing tones for mobile phones, due to its great compacity.

2.2.4. Therefore the features disclosed in D1 and D2 would be combined by the skilled person, without exercise of any inventive skills in order to solve the problem posed. The proposed solution in independent claim 27 thus cannot be considered inventive (Article 33(3) PCT).

2.3. INDEPENDENT CLAIM 42

2.3.1. Document D1, which is considered to represent the most relevant state of the art, discloses a device/system/method from which the subject-matter of independent claim 42 differs in that: the music data is composed of two message types.

2.3.2. The problem to be solved by the present invention may therefore be regarded as how to code both the sound and light sequence information in a format suitable for mobile phones.

2.3.3. In view of D2 the solution proposed in claim 42 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons: D2 teaches how to code both the sound and light sequence information in the MIDI format. This format was and is known to be particularly suitable for storing ringing tones for mobile phones, due to its great compacity.

2.3.4. Therefore the features disclosed in D1 and D2 would be combined by the skilled person, without exercise of any inventive skills in order to solve the problem posed. The proposed solution in independent claim 42 thus cannot be considered inventive (Article 33(3) PCT).

3. Document D2 discloses how to code both the sound and light sequence information in the Midi format (see page 1 lines 1-27, page 3 line 30- page 4 line 12), the light information for up to 8 lights being coded on up to 8 midi channels not used for sound reproduction.

The note-on/note off MIDI commands are used to turn lights on and off (page 3 line 33) and the note velocity MIDI information codes light intensity (see page 4 lines 5 and 6),

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just like in the present application

3.1. INDEPENDENT CLAIM 45 is only relevant to the midi file format as defined in D2, without any feature which would be really typical of mobile phone applications.

As can be seen from the above, the file format taught by document D2 is also "suitable for" activating lights on a mobile phone and discloses in combination all the features defined in independent claim 45. Hence the subject-matter of this claim is not new (Article 33(2) PCT).

4. Dependent claims 2-11, 19-26, 28-31, 38-41, 43, 44, 46, 47, 51-53

Dependent claims 2-11, 19-26, 28-31, 38-41, 43, 44, 46, 47, 51-53 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT). The features they add are essentially known or suggested from either D1 or D2 as detailed above.

Claims 46 and 47 as well as 51-53 even lack novelty with respect to D2 considered alone for the same reasons as claim 45 because the specific features of those claims are disclosed in D2 as follows: the note-on/note off MIDI commands are used to turn lights on and off (page 3 line 33) and the note velocity MIDI information codes light intensity (see page 4 lines 5 and 6 of D2), just like in the present application.

5. Dependent claims 12-18, 32-37, 48-50

The combination of the features of dependent claims 12-18, 32-37, 48-50 are neither known from, nor rendered obvious by, the available prior art. The reasons are as follows: they include modifications of standard MIDI which aim to increase the compacity of the obtained MIDI code so that the memory requirements for storing a MIDI file are less.

Although it is obvious for the skilled person to seek such modifications, the prior art does not specifically teach nor suggest exactly the modifications which are claimed in those claims. Therefore an inventive step can be marginally recognised for those claims, at the benefit of the doubt.

6. The claims could have been cast in two part form, with reference signs, as foreseen by Rule 6 PCT.

7. Art.6 PCT is not met because several claims are unclear.

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Numerous claims could not be fully understood because of lack of antecedents (for instance, claims 13-18 refer to a "mapping" which has no antecedent in most of the previous claims, so that the dependencies must be erroneous) or illogical (for instance, in claim 11 line 21, "first" appears unsupported and is illogical, it probably should be replaced with "second" or grammatically incorrect wording (for instance, "wherein and" in claim 7).

A rechecking of the coherence of the individual claims with one another therefore appears necessary.